

## WHAT IS CLAIMED IS:

1. An anti-cancer composition comprising N,N-dimethylphytosphingosine as an active ingredient.  
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2. The composition according to claim 1, further comprising at least one phytosphingosine derivatives selected from the group consisting of phytosphingosine, acetylated phytosphingosine and ethylated phytosphingosine.
- 10 3. The composition according to claim 2, wherein the weight ratio of N,N-dimethylphytosphingosine to phytosphingosine derivatives is 1:1.
4. A kit for treating cancer comprising the composition of claim 1.
- 15 5. The kit of claim 4, comprising the composition as an adjuvants of other anti-cancer drugs.
6. A sphingosine kinase inhibitor composition comprising N,N-dimethylphytosphingosine as an active ingredient.  
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7. An apoptosis inducing composition comprising N,N-dimethylphytosphingosine as an active ingredient.

8. A protein kinase inhibitor composition comprising N,N-dimethylphytosphingosine as an active ingredient.

5 9. An anti-inflammatory composition comprising N,N-dimethylphytosphingosine as an active ingredient.

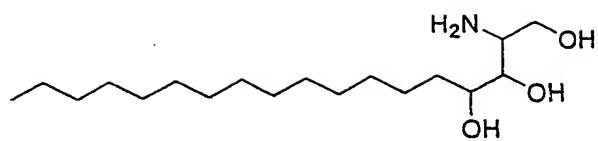
10. A composition for treating a hyperplastic disease comprising N,N-dimethylphytosphingosine as an active ingredient.

10 11. The composition according to claim 10, wherein the hyperplastic disease is psoriasis.

15 12. An antibacterial composition comprising N,N-dimethylphytosphingosine as an active ingredient.

20 13. A process for producing N,N-dimethylphytosphingosine comprising reacting phytosphingosine of the formula 2 with the formaldehyde in a solvent in the presence of reducing agent via the compound of the formula 3 as an intermediate:

[Formula 2]



[Formula 3]

